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REASONS FOR BELIEVING IN THE CONTAGIOUSNESS OF PHTHISIS.

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THE germ theory of diseases is by no means a new theory. One of its earliest advocates was Athanasius Kircher, a learned German Jesuit, who lived in the early part of the seventeenth century; and about the same time lived Robert Boyle, an eminent Irish philosopher, who believed in the truth of this theory. The renowned Linnæus, the father of botany, was not only an ardent investigator of its claims, but published several memoirs in their support. In the latter part of the last century it had such supporters as Sir John Pringle and Dr. William Farr, and in the early part of the present century it had such advocates as Sir Henry Holland, Schonlein, Cagniard de la Tour, Schultze, and many others.

To the illustrious Pasteur, however, belongs the distinction of having done more than any of his predecessors to develop this intensely interesting and important subject, and of presenting its truths in such a way that they have become of immense practical use to mankind. His indefatigable labors, the ingenuity and exactness with which he pursued his investigations, the practical demonstrations he has given of the utility of the truths he has discovered, are well known to men of science. This special field of investigation is now occupied by many able and accurate observers, and as a result of their labors the present generation may witness an epoch in the history of medicine startling in its brilliancy of grand achievements in subjugating disease; when men shall hold in their hands effective weapons and be enabled to erect impassable barriers before those destructive scourges—cholera, yellow fever, and tubercular phthisis. But two years ago the medical profession was startled by the announcement made by Robert Koch,[1] of Berlin, that "tuberculosis is a specific infectious disease, caused by a specific micro-organism, the bacillus tuberculosis, which constitutes in fact the tubercle virus." Truly, since the time of the immortal Jenner we have not had such a remarkable statement, nor one so weighty in its import! There is no reason to wonder why medical and other scientific bodies, the world over, have this subject so frequently under consideration.

The work of Dr. Formad, of this city, as well as the work of all other investigators in this field of research, has seemed to confirm the statements of Professor Koch. There is nothing more seductive than speculation regarding the outcome of their future labors, of the truths which shall belong to those who will follow us, and of the beneficent power these truths shall arm them with.

But it is only hard and intelligent work that can make this future a reality, and I am persuaded that the frequent discussions by our Society, of points connected with the study of germs as a cause of disease, will do much good by stimulating the efforts of those members who are engaged in such investigations, and by enabling others who are interested in this work to make suggestions or offer criticisms that may be of some advantage to them.

1 Die Etiologie der Tuberculose, Berliner Klin. Wochenschrift, 1882, No. 15.

In my paper this evening, I purpose to limit myself to answering in the affirmative a question of great practical importance propounded by Dr. Formad in his recent paper, namely, "Is consumption contagious?" Dr. Formad is disposed to answer it in the negative, and offers to you the names of a number of eminent physicians who apparently lend strength to his doubts concerning its contagiousness. For a number of years I have carefully studied this disease and as a result of my observations I am firmly convinced that it is contagious. Indeed, the contagious character of the disease is generally believed in, and is taught by the most able and experienced clinicians of our day.

When a disease is unusually prevalent it is very natural to suppose that it may be due to contagion or infection. Think, for a moment, of the ravages from tubercular phthisis. It exists in all climates; it affects all classes of people; it respects neither age nor sex. It claims about 20 per cent. of the death rate of the civilized world. The mortuary lists of our own city show a percentage in its favor amounting to about fifteen and a half, and the native population of those latitudes most frequented by consumptives succumb to this dire disorder as frequently as people do elsewhere! except, perhaps, Colorado. Is this to be accounted for by heredity or preëxisting lung trouble? If the disease was due to inheritance alone it would have become obliterated generations ago by a species of natural extinction, but the disease is increasing in a greater ratio than the increase of population, which shows that the disease *must be acquired afresh.*

Dr. Formad, in his valuable paper, makes the statement that "According to the observations of the most prominent clinicians who have paid special attention to this matter, there is not a single authenticated case of tuberculosis as a result of contagion on record." This assertion is not tenable, since cases are recorded by C. B. Coventry,[1] S. G. Morton,[2] Daniel Drake,[3] Tauchard,[4] H. G. Bowditch,[5] Vialettes,[6] Beregeret,[7] Hardy,[8] Seux,[9] Condie,[10] L. Tait,[11] Stevens,[12] Bernard,[13] Chamontin,[14] Herman Weber,[15] Flint, Sr.,[16] Holden,[17] Reich,[18] Da Costa,[19] Booth,[20] Bryhn,[21] and many others.

Is this not sufficient evidence that such cases are recorded? The fact that some of these names are better known than others does not militate against the honesty and care exercised by the less distinguished observers and their deductions, and are justly entitled to a fair consideration. Obscurity does not by any means imply ignorance, lack of ability, or keen perception.

Dr. Formad also asserts that "Among scores of experienced men who deny thus the contagiousness of tuberculosis it is sufficient to mention the names of Virchow, Recklinghausen and Stricker in Germany; Gull, William Watson, Paget, Humphrys and Richardson in England; Bennett in France, and Hiram Corson and Traill Green in our own midst—all men of close observation, with ripe experience extending over from thirty to fifty years." I also take exception to this statement, for Drs. Corson, Bennett, and probably many others mentioned in Dr. Formad's list, if heard from to-day, would not subscribe to this declaration, which finds fewer supporters than one might imagine to be the case. Some time ago I received a letter from Dr. Corson, in which he said: "Long since I advised my patrons not to have young daughters, who were compelled to wait on a consumptive mother, sleeping in the same room with the patient." This certainly shows that while Dr. Corson may not be a thorough convert to the contagion theory, yet he thinks it prudent to resort to preventive measures by securing as much separation as possible of the well from the phthisical individual. And Dr. Bennett, who is also quoted by Dr. Formad, records the following typical case of contagion in his work:[22] "A strong, healthy, well-made husband, aged twenty-seven, with no hereditary or constitutional taint or weakness, came over from Australia—

1 U. S. Med. and Surg. Journal, New York, 1835, p. 392.
2 Illustrations of Pulmonary Consumption, Phila., 1837, p. 80.
3 Principal Diseases of the Int. Val. of N. A., Phila., 1834, p. 915.
4 These de Paris, 1860, p. 37.
5 Boston Med. and Surg. Journal, 1884, p. 329.
6 These de Montpellier, 1866, No. 44.
7 Annales d' Hygiene et de Medicine Legale, 1867.
8 Bulletins de Academie de Med., 1868, p. 348.
9 La Marseille Medical, 1869, No. 4, p. 310.
10 Am. Jour. of the Med. Sci., July, 1871.
11 Ibid., Oct. 1871.
12 Boston Med. and Surg. Journ., 1872, p. 168.
13 These de Montpellier, 1872, No. 46.
14 Ibid., 1874, No 22.
15 Clinical Society's Trans. London, 1874, vol. viii. p. 144.
16 On Phthisis, Phila., 1875, 419.
17 Am. Jour. of the Med. Sci., July, 1878, p. 145.
18 Reynolds's System of Med., Am. Ed., 1880, vol. ii. p. 117.
19 Am. Jour. of the Med. Sci., April, 1878.
20 Trans. of Southern Ill. Med. Assoc., 1879.
21 London Med. Record, 1880.
22 On the Treatment of Pulmonary Consumption, Philadelphia, 1879, p. 51.

a four months' journey—in the same cabin as his wife, who was in the last stage of suppurative phthisis. She died soon after her arrival in England, and he came to Mentone that winter a confirmed consumptive, dying himself subsequently. He was perfectly well when he stepped on board of the vessel at Australia; but in a small confined cabin breathed for months an atmosphere loaded with pus particles thrown out of the suppurating cavities of his wife's lungs, possibly to his destruction." After referring to the inoculating experiments of Buhl, at Munich, he makes the following statement: "But in the face of the results that these researches have brought to light, *it seems to me impossible to deny that it may be communicated to the healthy by breathing constantly air saturated with the purulent secretions of advanced phthisis* [italics mine]. This is an all-powerful argument [I am still quoting Bennett], for the free ventilation of rooms occupied by the consumptive, for the sake of those who attend them and live with them, as well as for their own. In a confined atmosphere they probably poison themselves by their own fœtid breath, and extend disease to the healthy regions of the lungs."[1] Can this be used to confirm the belief of Dr. Bennett in the non-contagiousness of phthisis, or is it evidence in support of the position I take? This is but one of many similar cases quoted by various authors, who are scarcely willing to commit themselves while the evidence is so striking that they, like Dr. Bennett, feel constrained to express the possibility of a contagious element in their causation.

"Whatever has happened, is capable of happening again; the only question relates to the condition under which it happens,"[2] and what are the conditions under the present circumstances? This is exemplified in the following case, very similar to the one narrated by Dr. Bennett: "A lady, about thirty years of age, the wife of an officer in the army, left Calcutta with her husband to go by sea to Southampton. At the time of leaving Calcutta she was in robust health, whilst he was in an advanced stage of consumption. They had a single close cabin, and she performed all the duties of a nurse for her husband. The weather was stormy, and the hatches were more than once battened down. The husband died off the Cape, and was buried at sea. About three days later the lady arrived at Southampton. I was called to see her professionally. I found her with both lungs stuffed with tubercles, and she died in about six weeks afterwards. The painful duty was cast upon me of acquainting her with her condition, which I did, when she said, 'Impossible; I was never better in my life than when I stepped on board at Calcutta.' I knew the lady well and all her family, and there was no hereditary predisposition. In this case, all the necessary conditions for the propagation of the disease were fulfilled; a *high temperature*, in a close, ill-ventilated cabin, where the exhalations from the diseased lungs were inhaled by the sound lung, with the well-nigh inevitable result I have described."[3] Were these the only cases we would think our point sustained. There are, however, but few physicians in our large cities who cannot recall cases in which they would rather commit themselves to a belief in the contagiousness of consumption rather than to ascribe its cause to anything else.

The following cases, due to contagion, have been communicated to the writer and are worthy of record:—

Dr. J. Solis Cohen has kindly furnished me with the following case: "More than ten years ago Dr. H., of this city, sent me a young female from the country in advanced phthisis, much emaciated, with aphonia from pressure of consolidated apex on right recurrent nerve. I gave her little encouragement, and sent her home with some general instructions. Some two years later she called on me, asking me if I remembered the last words I said to her. I did not, but she repeated them: 'Your best chance is to take cod liver oil, live on it if you can; eat it with your bread; with anything.' She went home much depressed, and became bed-ridden for a number of weeks. She subsequently married; her husband acquired phthisis and died of it, and she was still living three or four years ago with consolidated apices and cicatrized cavities."

Juan B. Mears, of Monterey, Mexico, communicated to my friend Dr. A. C. W. Beecher, of this city, the following case: "A woman suffering from the last stages of consumption, who some year or two before had adopted a

1 Ibid, p. 53.

2 J. S. Mill, System of Logic, 8th Ed., London, 1872, vol. 2, p. 144.

3 Brit. Med. Journal, 1883, vol. 1. p. 21.

girl. The latter's mother, Mrs. H., questioned me about the safety of letting her daughter remain with the afflicted person. I examined the girl and found her strong and healthy, tall and well-developed for her age (about 16 or 17 years old), without any hereditary predisposition. I told her that I feared no danger to the daughter if she would only take some ordinary hygienic precaution. Well, the old lady died, and a few months afterwards Mrs. H. brought the girl to me, already with an as acute phthisis as I ever saw, and she died too. Questioning them about the case, they attributed the malady to the companionship of the old woman; they slept in the same bed, ate from the same dishes, breathed the same air, infected probably by the phthisical debris. I must add that the people here believe in the actual contagiousness of phthisis."

The following case occurred in my own practice, and is also worthy of record: "October 7, 1880, I was requested to attend professionally Mr. H. F., aged 52 years, who had been ill for one year with phthisis. He died September 23, 1881. During all of Mr. F.'s illness he was most carefully nursed by his wife, who occupied the same room constantly; she contracted phthisis, and died August 3, 1882, aged 50 years. Mrs. F.'s mother died twenty years previously of phthisis; her father died at the age of 56 of cancer."

I may be permitted, in view of the few eminent names offered by Dr. Formad in support of his theory, to mention the names of a number of men of equal practical experience in medicine, who have recorded their belief in the contagiousness of the disease: Aristotle,[1] Galen,[2] Riveris,[3] B. Morton,[4] Baume,[5] Cullen,[6] Herberden,[7] Darwin,[8] Coventry,[9] S. G. Morton,[10] Bright and Addison,[11] Dunglison,[12] Andral,[13] Drake,[14] Sir T. Watson,[15] Copeland.[16] Dickson,[17] W. Budd,[18] L., Tait,[19] Walshe,[20] Madden,[21] de Mussy,[22] H. Weber,[23] Holden.[24] Da Costa,[25] Rühle of Bonn,[26] Lichtheim,[27] Klebs,[28] Bollinger,[29] Flint,[30] and many others could be mentioned.

Dr. Formad lays great stress upon the fact that the medical officers and attachés of the Brompton Hospital have not contracted phthisis. This would be the last place in the world to look for the disease as the result of contagion, for every one knows who has visited that hospital that hygiene and regimen are most scrupulously carried out to the highest point of excellence known, the nurses and other attachés being on duty only a portion of the twenty-four hours, and when on duty are not constantly in the wards. Compare this with the manner in which patients are cared for in private practice. The nurse, a member of the family or friend of the stricken individual, generally occupies the same room, day and night—more especially in the advanced stage of the disease, and the hygiene and regimen do not, except in a few instances, receive proper attention; in some cases it is wholly neglected; every crevice about the windows, and sometimes even the key-holes, as I have more than once seen, are plugged up for fear a little fresh air might get into the room and the patient "take a cold."

As a rule, the nursing of the phthisical in private practice is unskilled, and the circumstances under which the nurses perform their office, render them more liable to fall victims to the disease. Cases of phthisis due to contagion *have*, nevertheless, occurred at Brompton Hospital, for Walshe[31] makes the following statements in regard to his assistants:—

"Curiously enough, of the first three clini-

1 Practical and Historical Treatise on Consumptive Diseases, by T. Young, M.D., London, 1815, p. 15.
2 Paulus Ægineta, Syd. Soc., 1844, vol. i. p. 286.
3 Practice of Physic. London, 1668, p. 170.
4 Phthisiologia, or a Treatise on Consumption. London, 1694 p. 67.
5 Phthisis Pulmonaire. Montpellier, 1789, vol. i. p. 189.
6 Practice of Medicine. Edinburg, 1790, vol. ii. p. 390.
7 Commentary on the History and Cure of Disease. London, 1802, p. 375.
8 Zoonomia. Phila., 1818, vol. i. p. 311.
9 U. S. Med. and Surg. Journal. New York, 1835, vol. i. p. 389.
10 Illustrations of Pulmonary Consumption. Phila., 1837, p. 80.
11 Elements of the Practice of Medicine. London, 1839, vol. i. p. 294.
12 Practice of Medicine. Phila., 1844, vol. i. p. 365.
13 Notes to Lænnec's Treatise on Auscultation, edited by Herbert. London, 1846.
14 Principal Diseases of the Int. Val. of North America. Phila., 1854, p. 915.
15 Principles and Practice of Physic. London, 1857, p. 217.
16 Dictionary of Practical Medicine. New York, 1859, p. 1228.
17 Elements of Medicine. Phila., 1856, p. 625.
18 The Lancet, 1867, vol. 2.
19 Amer. Journal of the Medical Sci., 1871, vol. ii.
20 Diseases of the Lungs. London, 1871, p. 452.
21 Dublin Journal of Med. Sci., vol. xl. p. 33.
22 Brit. and For. Med and Chir. Rev., April, 1870, p. 529.
23 Clinical Soc. Trans. London, 1874, vol. viii. p. 144.
24 American Journal of the Med. Sci., July, 1878.
25 Ibid., April, 1878.
26 Medical Record. New York, May 19, 1883.
27 Ibid.
28 Ibid.
29 Ibid. March 22, 1884.
30 Med. News. Phila., Jan. 19, 1884.
31 Diseases of the Lungs, London, 1871, p. 459.

cal assistants I had at Brompton, two died of phthisis, and the third left the establishment with slight hæmoptysis, cough and chest uneasiness. The latter is now (1871) in perfect physical condition, one of the former had clearly been affected before he came to the hospital; the other was a model of sturdy health when he took the office."

He says further:—

". . . I must confess, my belief in the reality of such transmissibility has of late years been strengthened. I have met with so many examples of the kind, that 'coincidence' becomes itself an explanation difficult of acceptance. I have besides, in three instances, seen a robust husband become distinctly and actively phthisical, as shown by general and local symptoms and physical signs, and on the death of his phthisical wife, whom he had closely tended, fall into the retrogressive stage of the disease, and ultimately practically recover."

Hereditary influence in producing the disease is not as great as many believe, and all efforts have failed to prove, by statistics, the existence in a majority of the phthisical of an unfavorable tubercular family record. Walshe[1] says: "The final conclusion from the analysis of the family history of 446 persons is, *that phthisis in the adult hospital population of this country is to a slight amount only a disease demonstrably derived from parents.*" "Of 374 cases occurring in old women at the Salpètrieré Hospital, reported by Piorry, 78 died without presenting any traces of tubercle, although their parents died from that disease."[2] Dr. Cotton, who analyzed 1000 cases at Brompton Hospital, found only 365 cases in which hereditary taint could be proved; Scott Allison's observations, at the same institution, show, in 603 cases, a hereditary influence in but 19. Walshe concludes, after most careful investigation, that not over 26 per cent. can be traced to hereditary taint. How, then, are we to explain the cause in the remaining, we will say, 60 per cent.? Are they to be traced to pneumonias, pleurisies, or kindred diseases? Or are we to conclude that there is a specific poison to which they may be exposed which produces this disease? I think there is, in fact there must be such a specific poison.

I will here give a hypothetical case, in order to show the *fallacy of hereditary transmission of disease:* A. B. is stricken with tuberculosis, the family are amazed at the announcement of the fact by the attending physician, and they state that the parents and grandparents are still living and enjoying good health; the family trace back to the third generation, and find that a great-grandmother died of phthisis, and this gives some satisfaction as to the disease being in the family. And if we go back three generations to find the cause for tuberculosis, why not go back four or five if nothing is found in the third, or failing to find it in these go back as far in the family history as tradition may extend, and finding one ancestor who *probably* died of phthisis, to conclude that therefore the case we see is transmitted from that ancestor. This, to my mind, is absurd, and yet I know the tendency of family and physician (particularly the latter) to look for this in the transmission rather than in an acquirement in the individual, *per se.* It is not sufficient to declare hereditary transmission when even some of the children of phthisical parents, while partaking of their delicate constitutions (that is, delicate in figure and lacking ruggedness) will live to good round ages and perish from other diseases.

I do not assert that exposure to the poison will produce the disease in all individuals any more than other zymotic poisons will, for there are many who are, for the time at least, insusceptible to their action, and this is owing to the fact that they present no proper nidus for the poison-germ, yet from this we are not to argue that the germ itself is less potent to an individual susceptible to it. The belief in the contagiousness of the disease is as old as its literature itself. As long ago as 1668, Riveris,[3] who for more than twenty-five years was Professor of Physic in the University of Montpelier, in speaking of the causes of phthisis, wrote as follows: "Moreover, there are external causes, as contagion, which is the chiefest; for this disease is so infectious that we may observe women to be infected by their husbands, and men by their wives, and all their children to die of the same, not only from the infection of their parents' seed, but from the company of him that was first infected. And this contagion is more easily communicated to those

1 Diseases of the Lungs, 4th ed., London, 1871, p. 462.

2 Quoted by Dr. Durant, Trans. of the N. Y. State Med. Soc., 1871, p. 172.

3 Practice of Physic. London, 1668, p. 170.

that are of kin, wherefore it is not safe for a brother or sister to enter into a chamber, for the *miasmata* or infective vapors, which come from their lungs and infect the whole air of the chamber, and being drawn in by others (especially if they are in any way disposed to the same disease) beget the same disease in their lungs."

Not only among the members of our profession, but among all classes of people, the belief is prevalent, especially in Italy, Southern France, Spain, Portugal, and Mexico. At the Canary Islands they look upon consumptives as little better than lepers, and they are kept in a species of quarantine, being subjected to many vexatious restrictions in regard to their intercourse, with the indigenous population. This would serve to show that there must be some well-grounded reason for such belief, and it ought not be regarded as superstition.

It is impossible to comprehend how a disease, specific in its character, and definite in its course can be transmitted from parent to child; how the germ comprising the complicated organism of man could develop from the microcosm into a highly complex creature, carrying with it the elements of destruction as a part and parcel of its structure. Such teaching is opposed to all known biological facts, and it seems that writers have fallen into the fashionable professional rut in searching for the etiology of many diseases, and in none more deeply than ascribing hereditary transmission, when in reality they should say an hereditary predisposition to certain diseases.

There are a number of authorities who hold the opinion that phthisis is transmitted from parent to offspring, and among the number is Sir Wm. Jenner,[1] who states: "That tuberculosis is transmitted from parent to child, is one of the established facts in medicine." This is absurd. If the disease is transmitted, why does it remain latent for so many years? There is no such thing as the direct transmission of a tubercular virus from parent to offspring. This has been shown by such pathologists as Guizot, who, "In four hundred post-mortem examinations of the bodies of new-born infants, failed to find a single deposit of tubercle, and Gluge asserts that there is no born tubercle."[2] Tuberculosis to-day is the same, and manifests itself in the same manner that it did centuries ago. It reveals the same pathological appearances in one case as in another, and maintains its specific character under all circumstances. How, then, is it possible to harmonize known facts with the doctrine of hereditary transmission, when diseased parents and the east wind are equally effective in producing the same specific result? That constitutional peculiarities are not pathological, needs no argument; and therefore our faith in their transmission need not be put upon the stretch in acquiescing in this belief. Nor is it to be denied that constitutional peculiarity may be acquired, and still leave the body in a physiological condition. As an instance: Most persons have a transmitted constitutional condition of body that may be infected by the virus of smallpox; this habit of body may be so altered, by vaccination or otherwise, that it cannot be infected, and still leave the body in a physiological condition. The susceptibility was transmitted and it is destroyed. On the other hand, the susceptibility may be acquired instead of being transmitted, so that he who was born constitutionally protected may become jeopardized if exposed to the infecting influence of the smallpox germ. Even in the propagation of this highly infectious disease two distinct factors are engaged, between which there is a perfect co-adaptability, if I may so speak, for when they are brought together they combine to bring about a certain result, uniform in appearance and constant in character.

We have a marked illustration of the fact that certain modified conditions of the parents are not transmitted to the offspring in the case where parents have been vaccinated, and yet there is no protection from smallpox in the child. This has been aptly compared to the soil and the seed. The earth could not bring forth fruit without the seed; the seed could not germinate and reproduce itself without the soil. The soil in order to be productive should be fertile, and the seed should embody within itself the elements of life. The condition of the body, like the condition of the soil, determines its efficacy as a factor and its relevancy to a specific result, when joined to that other factor, the seed or germ, in the production of disease. The body is the soil for disease-producing germs. If the body does not offer a suitable nidus, the seed planted therein could not germinate, grow, bloom, or fructify. This

1 The Practice of Medicine To-Day. London, 1869, p. 48.
2 Quoted by Durant, Trans. of the New York State Med. Society, 1878, p. 174.

peculiar condition of various parts of the animal body, which offers a suitable soil to disease-producing germs, is familiarly known in medicine as *predisposition*. It is *that* which is transmitted from parent to child—the predisposition to certain diseases, and not the disease itself. A tuberculous parent may transmit this soil, this habit of body, this *predisposition*, to his or her offspring, but cannot under any circumstances at the same time transmit the seed in a dormant state already planted in that soil. Dissections, as already stated, have not revealed tubercles in the new-born. They may be born with many physical imperfections, but never with any trace of tuberculosis. The individual must be subjected to disturbing extrinsic causes before there are any evidences of tuberculosis, and when such manifestations do occur, they are of a peculiar and constant kind. One case of tuberculosis is as much like another as one case of smallpox is like another of that disease. It would indeed be a strange coincidence, and one that could not be accounted for by any telluric or atmospheric influences so variable in their nature and uncertain in their operations. When we observe a constant recurrence of symptoms and pathological changes in a series of cases, we naturally conclude that a specific cause is operating upon a peculiar condition of body to produce such a uniform result. It is evident that the offspring of phthisical parents sometimes escape the disease, for M. Pidoux states that, "Not over twenty-five per cent. of those born of consumptive parents themselves become phthisical."[1]

The predisposition is not only inherited, but is also acquired by the offspring of healthy parents; thus parents of non-phthisical children may themselves acquire the disease under conditions favorable to development. It is not contended by those who believe in and know the fact of the contagiousness of phthisis, that the disease is thus contracted as frequently as other infectious or contagious diseases are acquired; but I am free to say, however, that there is far more danger to be dreaded from nursing the phthisical in private practice, than there is from nursing cases of typhoid fever. In the latter disease, the *materies morbi* reside in the excreta, and by cleanliness the infectious element is promptly removed, and the danger lessened. This is not the case in phthisis, for in that disease the *material cause* resides in the effete matter constantly being thrown off from the lungs of the stricken individual, especially in the advanced stage of the disease. This has been proven by Ransom,[2] who found the bacillus tuberculosis in the air of a room containing several advanced cases of phthisis. Dr. R. Charnley Smith[3] detected them in a respirator worn by a phthisical patient, and Dr. C. T. Williams[4] by an ingenious method has found the bacillus in fair abundance in the extracting flues at Brompton Hospital. The tubercular bacillus is characteristic, and can readily be discriminated from all other bacilli. It has been found in all the tubercular lesions of the organs and tissues of the body of the phthisical, including, of course, the osseous system and its medullary substance. It has also been found in all the secretions and excretions of organs similarly affected. It is a well-known fact that phthisis prevails to a great extent in most of the European armies, and this prevalence can only be accounted for by the contagious character of the disease. As an evidence of this, it might be stated that Surgeon-General von Lauer,[5] of the Prussian Army, has recently issued a circular to the medical officers, directing them not only to isolate the phthisical from the non-phthisical, but *special means be taken for the disinfection of the sputa in tubercular cases.*

Sir Wm. Wild,[6] in the Irish Census Reports for 1851, states "That in the years 1847–48–49, there died of phthisis, in Ireland, 66,000 persons, or 22,000 per year." This occurred before the tide of emigration to this country set in. So frightful a mortality can only be attributed to the crowding together of people obliged to breath an atmosphere loaded with the germs of this disease.

It is well known that the red as well as the white blood-corpuscles sometimes leave the vessels and migrate through the adjacent tissues. They have even been seen to enter the vessels. These corpuscles, as is also well known, are from the $\frac{1}{3200}$ to the $\frac{1}{4000}$ of an inch in diameter. How much easier would it be for the *tubercle bacillus*, which is generally described

1 Quoted by Dr. Durant, Trans. of the New York State Med. Society, 1871, p. 172.

2 A Hist. of Tuberculosis, by E. E. Sattler. Cin., 1883, p. 164.

3 The Lancet, Jan. 20, 1883.

4 Ibid., July 28, 1883.

5 Sanitary Engineer, 1883, vol. viii. No. 20.

6 Dublin, 1856, vol. i. p. 447, also quoted by H. McCormac, M.D., "On Consumption." London, 1865, p. 225.

as varying in length from the $\frac{1}{12000}$ to the $\frac{1}{4000}$ of an inch, and having a breadth of $\frac{1}{5}$ of its length, to escape from or enter the bloodvessels? It is through the medium of the lymph and the blood that these bacilli are carried throughout the system. The tubercle is developed according to, and is governed by its own laws, as are the eruptions of smallpox, or the formation of false membrane in diphtheria, and who will deny that there is a *specific contagium* in the blood, in cases of these diseases, before such local manifestations occur? I hold that tubercle, as we know it, is never a primary product; it derives its origin from the action of a pre-existing *materies morbi*. The lymph or the blood carries the morbific material throughout the body, and certain organs attempt to eliminate the poison, but failing to do so, become themselves the ground in which the poison accumulates. Why certain organs are more prone than others to become the receptacle of these deposits, I will not here attempt to explain. Perhaps the peculiar structure of the lungs, and the fact that all of the blood of the body must and does pass through them in great quantity and with great velocity, may be one reason why they are apt to be the seat of tubercular deposit, the softening and breaking down of which is the result of an inherent irritation of the *materies morbi;* this being a foreign matter, the lungs rebel against its presence and make an effort to cast it off. More or less perfect parallels are seen in the exanthems, where the skin becomes the eliminating organ. In diphtheria, where elimination is by the mucous membrane, and in smallpox, scarlet fever, measles, and erysipelas, diseases each having its own peculiar and characteristic eruption, each respective disease being due to the presence and action of a peculiar characteristic *materies morbi* prior to the appearance of local symptoms. In the attempt at elimination or resistance to the invasion of these poisons, we have the lesions so characteristic of them and generally recognized as belonging to the disease. Do they constitute the disease, comprising both its cause and effect? By no means; they are but the expression or effect of the cause, precisely as tubercle in the lung or elsewhere is but the expression or effect of a pre-existing *materies morbi*.

The germs producing these diseases are not diseased germs; they are germs in perfect health as to themselves, and are capable of producing disease only where a nidus suitable for their development is found. It seems to me unnecessary to enter into any labored course of reasoning or offer any lengthened recital of examples, further than has been done in this paper. There is still a ring of mystery in the minds of some physicians about this whole matter. But when, in the near future, the smoke and dust have been made to subside by the great workers who are now engaged in this promising field of labor, and when all the avenues and by-ways are macadamized, so to speak, by their results, then will this much mooted and intricate subject be far on the way to a final settlement, and millions of lives saved annually from premature graves.

So thoroughly am I impressed with the importance of this question, and of the incalculable advantage a thorough understanding of its bearings must be to the members of my profession, that I feel I have not consumed time unprofitably in my effort, however faulty it may be, to set before you the facts which have convinced me of the contagiousness of a so fearfully common and invariably fatal disease as tubercular phthisis.

556 NORTH SIXTEENTH STREET, Philadelphia.

THE DEMAND FOR EARLY EXPLORATORY TREPHINING

IN DEPRESSED FRACTURES OF THE SKULL.

BY JOHN B. ROBERTS, M.D.,
Professor of Anatomy and Surgery in the Philadelphia Polyclinic.

Read before the Philadelphia County Medical Society, June 16, 1884.

IN using the term trephining I apply it to all methods of removing portions of the cranial wall, whether by the trephine, saw, burr of the surgical engine, gouge, or cutting forceps.

From observation, experience, and considerable acquaintance with the literature of the subject, I am convinced that surgeons are induced to decline or postpone the operation of trephining because of a mistaken idea of its serious nature, and a misunderstanding of the reasons for its adoption.

The frequency with which successful trephining was done in past centuries without the benefit of our improved methods and instruments, and the infrequency of death or serious symptoms from the operation itself at the present day, convince me that, though a capital

operation, it is not one having in it many elements of danger. That many deaths occur after trephining, is admitted. Such fatal results must often occur, for injury to the skull bones is usually and almost necessarily coincident with disturbance or actual lesion of the brain or its membranes. I believe that more deaths are attributable to non-performance or delay in resorting to the performance of trephining than to its adoption. It behooves those who greatly limit the application of the operation to prove, by citation of cases, that a fatal issue has been induced by the procedure itself in a sufficient number of instances to throw the operation into that class called dangerous. To merely show that many cases of serious skull injury recover without trephining is not sufficient.

Much controversy on this subject would be avoided if the advocates and the opponents of an extended use of trephining would clearly formulate their opinions as to the theory upon which the operation is performed. In my opinion, trephining should be regarded in the light of an exploratory rather than a therapeutic procedure. I incise the scalp, in closed fractures of the skull, not because the incision cures, but because it tells me the condition of the bone, without which knowledge I am unable to treat the patient rationally. The uncertainty of the lesion is, in my opinion, more dangerous to health and life than the conversion of a closed into an open fracture of the skull, because the observation of the profession teaches that open cranial fractures do not resemble, in fatality, similar open fractures of long bones. In truth, I would be willing to make a closed fracture of the thigh or leg an open one, if it was otherwise impossible to replace fragments which were threatening life. If I but learn the character of the skull lesion, I am acquainted with surgical expedients that render restoration to health more probable than the complication due to the incision renders it improbable. Hence I am justified, nay, compelled, by my reason, to advocate exploratory incisions of the scalp in obscure injuries of the skull.

The same line of reasoning forces upon me the conclusion that I should trephine whenever the fracture, whether originally an open one or so made by my incision, presents the possibility of the inner table being detached and splintered more extensively than the outer. In other words, I should cut the scalp to see the condition of the outer table; I should cut the bone to see the condition of the inner table, in every case where the risk of obscure knowledge is greater that the risk of divided scalp and perforated bone.

Many experimental fractures made in the dissecting-room, and observation of cases in the practice of myself and others, teach me that extensive shattering of the inner table, with only a moderate amount of fracturing of the external table, is of frequent occurrence in other as well as in punctured fractures. I admit that the condition in the dead subject, with its shrunken brain, is different from that in the living; but there is much evidence of the same splintering to be found in the study of accidental and homicidal skull fractures. Punctured fractures have long been treated by early trephining, to avert encephalitis. For the same reason I recommend resort to trephining in more diffused and less accentuated fractures. It is to prevent inflammatory sequences due to splinters forced into the membranes and brain, and to avert the consecutive occurrence of epilepsy and insanity, that the operation should be performed; not because of the fear that symptoms of compression of the brain may arise, nor because necrosis of detached portions of bone may occur.

I am not a believer in the pathology that teaches that the symptoms which we call "compression of the brain" are due to displacing pressure exerted on the brain substance. How can a slight or even a considerable depression of a limited area of bone produce much pressure upon the brain substance? How can the usually limited extravasation of blood under the seat of fracture fatally compress the brain, which is of firmer consistence than the blood itself? A rapidly acting heart, after violent exercise, will throw enough additional blood into the cerebral vessels to produce more intracranial pressure than the ordinary depressed fracture. The complexus of symptoms called compression of the brain may possibly be the result of a disturbance in the local capillary circulation of the membranes and subjacent nerve tissue; but I cannot believe it to be due to compression or displacement of the brain itself. It is more probable that compression symptoms are the results of encephalitis, due to injury from spicules of the inner table, or to the irritation of intracranial bleeding.

As soon as the profession repudiates the idea that brain displacement is what causes compression symptoms, so soon will every surgeon be convinced that early trephining is a proper exploratory procedure in order to determine what measures are demanded to avert encephalic inflammation.

"Compression of the brain," as seen after injury, should be translated "inflammation of the brain," and looked upon as probably due to unrelieved irritation of the brain periphery, from traumatic causes. Not until this is so understood will the discussion as to the utility of trephining in depressed fractures cease.

I repeat, then, that trephining is not a therapeutic but an exploratory operation; and, as such, is demanded with much greater frequency than is usually supposed. If it is to be employed for exploratory and diagnostic purposes, early resort thereto needs no defense.

When about to use the trephine itself for perforating the skull, to allow elevation and extraction of fragments, the surgeon should select a small conical instrument; one not over three-eighths of an inch in outside diameter at the cutting end is large enough. Those usually kept by the instrument makers are too large. It is only necessary to bore an opening sufficiently large to admit the end of the elevator; hence a small trephine is always more proper than a large one, except in those comparatively rare cases where a large disk is to be removed *over* the line of an old depressed fracture. Recently I visited the four principal instrument makers of Philadelphia, and could not find in stock any trephine as small as that which I recommend. The belief which has caused trephines to be made so large is founded on an erroneous theory.

In recent depressed fractures the trephine crown should be applied upon the solid bone, and should overlap the *least* depressed edge of the displaced fragment. This allows more ready elevation or extraction by means of the elevator, because the *most* depressed edge is very frequently beveled, with the inner table broken at a more distant spot, and is thereby wedged under the solid portion of the skull at that side. Elevation at the least depressed edge is effected more readily and with less danger to the brain from the manipulation.

To conclude, I assert that in all subcutaneous injuries of the head with possible existence of depressed fracture, an immediate exploratory incision should be made in the scalp. In all instances of depressed fracture with *possible* existence of splintering and spiculation of the inner table, an immediate exploratory trephining of the skull should be done.

TWO CASES OF INTESTINAL OBSTRUCTION.

ONE FROM IMPACTED FECES, THE OTHER BY STRICTURE DUE TO CANCER, WITH SPECIMEN.

BY GEORGE W. VOGLER, M.D.

Read before the Philadelphia Co. Medical Society, June 18, 1884.

MODERN writers usually enumerate the causes of intestinal obstruction as follows: 1. Congenital malformation. 2. Internal strangulation. 3. Intussusception or invagination. 4. Constriction. 5. Compression. 6. Impaction of foreign bodies or intestinal concretions. 7. Impaction of fecal masses.

Upon looking through the statistics of intestinal obstructive diseases, certain striking facts are noticeable. It is difficult to estimate the comparative frequency of intestinal obstruction. It is by no means a very common affection, always dangerous, and in a very large proportion of cases resulting fatally. Statistics show that most forms of obstruction of the bowels are more often met with in the male than in the female subject, the exceptions being obstruction by gallstone or fecal matter; constrictions by peritoneal or other adhesions, and compression of the intestine by tumors or displaced viscera.

As regards age, and the portion of the intestine involved:—

Obstruction by gallstones always occurs late in life, and involves the jejunum and ileum. Intussusception may occur at all ages, especially during childhood, and is confined chiefly to the large intestine.

Stricture is a disease of adult life (of course always omitting congenital malformation) involving the large intestine; three-fourths of the total number being below the middle of the transverse colon.

With these few introductory remarks I will proceed at once to the reading of the notes of a case of intestinal obstruction by constriction due to cancer:—

Mrs. Mary Müller, German, aged 58 years, widow, was admitted, April 18th, into the ward of my friend and colleague, Dr. Adam Trau, at the German Hospital.

For some six months previous to her admission she had been under almost constant treatment by physicians. She states that constipation was her chief symptom, for which all kinds of purgative remedies and various procedures were used, with but little avail.

She was anæmic, considerably emaciated, and very weak. Chief symptoms were obstinate constipation, great tympanitis, severe pain and almost incessant vomiting. Temperature and pulse not much disturbed.

A careful physical exploration of the abdomen, vagina, and rectum elicited no sign of a tumor.

A long œsophageal tube was readily passed into the bowel, even to the length of twenty-seven inches, according to the statement of the medical resident.

In brief, it seemed that the case was one of a paresis of intestinal movement, due to some defect either in the intrinsic ganglia and nerves of the muscular intestinal coat, or through imperfection of the muscular tissue by degeneration; or both these causes combined.

The treatment consisted in the use of purgative remedies, large watery and stimulating enemata, with comparatively no results; turpentine stupes, followed by hot flaxseed poultices gave some ease. The introduction of a long œsophageal tube into the bowel and massage of the abdomen afforded much relief. So great was the tympanitis shortly before her death that respiration was materially interfered with, necessitating the introduction of a small aspirating needle to afford temporary relief.

She was fed by pancreatized milk per bowel, and Cibil's beef extract and stimulants by mouth. Death occurred, April 29th, by asthenia.

Owing to the interest taken in the case during life, the following gentlemen were present at the post-mortem examination, by invitation of Dr. Trau: Drs. Formad, Dercum, F. H. Gross, Barton, Jones, Vogler, and the residents, Weed, Stabler and Rehfuss.

Body emaciated and abdomen greatly distended, the intestinal convolutions plainly mapped out upon the abdominal wall. The distension of the intestines, particularly the colon, was simply enormous. Some adhesions noted. At the lower part of the descending colon a constriction was seen. This part of the intestine was carefully removed, and when subjected to the hydrostatic test, was found to be impervious to a downward current, but readily permitted the passage of an upward current. On opening the specimen along the line of the mesenteric attachment, a valve-like scirrhous tumor was exposed, which readily accounted for the phenomena observed in life, viz: 1. Ready introduction of fluids into the bowel by a fountain syringe, also a rectal tube. 2. Failure of the fluid to be voided after withdrawal of the tube. 3. An almost total absence of the natural passages from the bowel.

The specimen which I now pass around is well worth a careful inspection, the lesion consisting of two valve-like scirrhous masses completely encircling the bowel, to which it is alone confined.

The other case of intestinal obstruction was due to impacted feces:—

Mrs. F., aged 64, private patient, afflicted for many years with habitual constipation, frequently going many days without an evacuation; commenced complaining some three weeks previous to my visit with severe pain in the left lumbar and umbilical regions, and an impossibility to relieve the bowels by powerful purgatives.

No other symptom of note troubled her up to within a few days, but now she was suffering with some fever, pain, nausea, exhaustion, and was passing some bloody mucus from the bowels.

Careful examination of abdomen and vagina revealed a large, hard, and irregular-shaped body or tumor, situated in the left lumbar region, painful to the touch, slightly movable, and entirely free from womb and its appendages.

The diagnosis was determined by the history, the absence of acute symptoms, physical examination, and by the process of exclusion of other causes of obstruction. By this time her life was in great danger.

The treatment consisted chiefly in the frequent use of large enemata of soap-water, castor oil, turpentine and laudanum.

Small doses of calomel and ipecac were given by mouth. After two or three days some small and hard pieces of fecal matter were passed for the first time, and a careful examination indicated the mass to have broken in two, one occupying the old position; the other, the sigmoid flexure.

She was vomiting at this time.

The quantity of fecal matter that came away during the following week was enormous. At

one sitting as many as twenty-seven large pieces of hard, dry fecal matter came away, and I give this merely as an illustration of the quantity passed at one time. Frequently it became necessary to unload the rectum by digging out the masses.

At times bloody mucus came away.

Of course, pain was very great during these operations, and opium had to be resorted to.

Gradually the swellings began to grow less, and finally disappeared. The patient was able to trace their slow movements along the intestines by the intense pain.

Only after weeks of careful treatment did this patient fully recover her health, and, strange to say, with a radical cure of her habitual and long-standing constipation.

ETHERIZATION BY THE RECTUM.

REPORT OF FOUR CASES BY YVERSON'S METHOD.

BY JOHN S. MILLER, M.D.

Read before the Philadelphia County Med. Society, June 18, 1884.

I DESIRE to report four cases of etherization by the rectum, a method of producing anæsthesia first suggested by Dr. Axel Yversen, of Copenhagen. These cases were in my recent practice; and to Drs. Louis Jurist and A. B. Hirsh I am indebted for assistance rendered and for many of the observations made. In two of these cases the mucous membrane of the bowel was prepared for its respiratory function, as it ought to have been in all, by a restriction of diet and the use of purgatives. No preliminary hypodermics were used. The method of administering the ether was simple. A definite quantity was placed in a bottle (only partially filling it), was vaporized by a water bath at 120°, and the vapor conducted to the rectum by a rubber tube, terminating in a recurrent catheter, the free or recurrent end being closed by pressure of the thumb during the inflation of the bowel; the expiratory act was performed by removing this pressure, and removing the water-bath.

The first case was one for minor operation, demanding only primary anæsthesia. This patient had not been prepared, and sufficient precaution was not taken against the introduction of ether vapor in too great a quantity. Almost immediately he complained of burning and tenesmus, the abdomen became promptly and greatly distended, and there were colicky pains. In about one minute he noted the taste of ether. A portion of the vapor was allowed to escape, and no more was given. The pain ceased, intoxication soon began, and in six minutes he was sufficiently anæsthetized for operation. The pulse was full, and respiration was easy. Two minutes later he returned to consciousness, but seemed dazed. The struggling had been trifling. There was no vomiting, and no diarrhœa followed. One ounce of ether was used.

The second patient was an adult male, from whom I removed an exostosis of the vomer—an operation requiring full anæsthesia. In this case a sufficient laxative had been given the previous night. Two hours before the operation he had been allowed an ordinary breakfast. This patient, too, experienced a prompt burning and discomfort in the rectum, but at no time great, and soon ceasing. Ether was tasted in about two minutes, and noted on the breath. The abdomen seemed distended and some cramp-like pains were experienced. A considerable amount of vapor was then allowed to escape—with instant relief. After waiting two minutes without the development of further phenomena, a somewhat less amount of vapor was introduced, and (the catheter being withdrawn) was left for gradual absorption. The stage of excitement was short, marked by a pleasant delirium, and without motor activity. Full anæsthesia was obtained in eleven minutes from the first introduction of the ether vapor, and was perfectly maintained during the eight minutes of operation. Escape of the residual vapor was secured by a gentle kneading of the abdomen, and separation of the nates. The posterior nares not having been plugged, considerable blood regurgitated from the stomach after operation. This vomiting cannot, with any certainty, be attributed to the ether. No diarrhœa followed. An ounce and a half of the anæsthetic was used.

The third patient, also an adult, robust male, was subjected to acupressure of the internal saphenous vein, with destruction by means of Vienna paste of several neighboring vessels—an operation also requiring full anæsthesia. He had received a laxative the day before, and an enema on the morning of operation, and had taken a moderate breakfast. The sensation of warmth and tenesmus was immediate, but soon ceased. The abdomen became distended, and he complained of epigastric pain. A partial escape of vapor was permitted, and he had in-

stant relief. A few minutes later the bowel was again inflated, and the tube withdrawn. Enough vapor remained after withdrawing the tube to produce complete anæsthesia in a total of fifteen minutes; and no further introduction was required to maintain it. There had been almost no stage of excitation, and that with no other phenomena than an immoderate laughing. He recovered promptly. No vomiting or diarrhœa followed. A little less than two ounces of ether were used.

The fourth case was that of a medical gentleman in good health, whose love of science led him to volunteer a passive part in these experiments. This time the bowel had not been prepared, although an ordinary movement had taken place five hours previous. On introducing the vapor, there was slight burning and tenesmus, but no cramps. Intoxication was soon induced, and the doctor seemed most of all to enjoy the proceedings. Pulse and respiration were normal. A lively peristalsis now put an end to this mode of administration, and terminated the experiment.

The only reason for quoting this case, is the evidence it furnishes for the necessity of preparing the bowel—a necessity which excludes this method of etherization from our resources in accident and emergency cases.

This case completes the four, and I have had no other opportunities for observation.

Some question having arisen as to whether the vapor really does pass the ileo-cæcal valve, I deemed this a subject for legitimate vivisection; and etherizing a cat per rectum, opened the abdominal cavity, and noted that the small intestine was as greatly distended as the large.

In this method of etherization the most obvious advantages are as follows:—

1. Dyspnœa is avoided, and the patient is saved from the anxiety due to a sense of impending suffocation.

2. There is avoided the danger of simultaneous irritation of the superior laryngeal and pneumogastric nerves at the periphery—these irritations neutralizing each other in the respiratory centre, and suspending respiration entirely.

3. The danger of asphyxia is lessened—the patient not being drowned in his own mucus, and the integrity of the pulmonary mucous membrane, as an organ of gas exchange, is preserved. Of course some vapor finds itself in the lungs, and acts there as a local irritant—elimination being by that channel. But the quantity is not great, and does not constitute a source of danger. In the cases reported, the increase in secretion was too trifling for discovery.

4. The stage of excitation is therefore not prolonged by the struggles for breath. In general it may be said that the delirium of any alcoholic intoxication is a pleasant and good-natured one, unless the patient is crossed—as he certainly feels himself to be when a wet towel is pressed over his face.

5. Nourishment may be taken before operation to sustain the powers of life, and lessen the dangers from shock.

6. Return to consciousness is prompt—this stage not being prolonged by carbonic-acid poisoning.

7. The anæsthetic seems as readily suspended as by the ordinary method—the bowel being promptly emptied by gentle massage.

8. Economy in ether is an advantage hardly to be mentioned with more important considerations.

The more obvious disadvantages are:—

1. The exposure of person required—the abdomen being necessarily under observation, even if the catheter be inserted under cover.

2. More judgment and experience is required in the administration, than by the ordinary method—over-boiling in the apparatus, and too much distension, being both painful and highly dangerous. The warning to cease is sudden, and must be immediately obeyed.

3. Just as the other mode is inconvenient in oral surgery, so in perineal operations is the apparatus needed for this method in the way.

4. In abdominal surgery, or if there be marked intestinal lesion, this mode is contra-indicated.

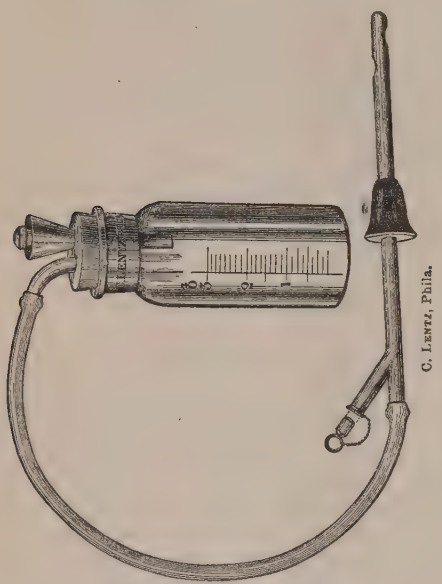
5. The inapplicability in cases of accident and emergency, when time cannot be allowed to prepare the bowel, has already been mentioned.

6. Diarrhœa has been noted in seven out of the thirty-seven cases on record, though in none of mine.

I believe this sequel is due to preëxisting intestinal lesion, to the lack of preparation, to a too great distension of the bowel, or to the accidental introduction of ether in liquid form. Furthermore, my method has differed from that of other experimenters in this respect, that instead of allowing the vapor to remain indefinitely, I secured a constant change by using a

recurrent catheter, and introducing a certain quantity, or permitting it to escape, as indicated.

Other points of advantage and disadvantage may occur in later experience, and to other observers, and new dangers may be discovered. But I am convinced that this new method is worthy of further trial, and will find its place in surgery, fulfilling its own, though not all, indications. Like all else in therapeutics, it must pass through the stages of bungling use, condemnation and revival.



Dr. Miller then exhibited a form of apparatus which he had had made by Chas. Lentz & Sons, No. 27 South Tenth Street, for this purpose. It consists simply of a water-bath, a graduated bottle provided with a funnel and valve for pouring in the ether, and a supply-pipe for conducting the vapor to the rectum. This tube terminated in a straight recurrent catheter, the exhaust channel of which is con trolled by a valve. The catheter is furthermore provided with a movable collar for pressure against the anus—it having been found that the vapor tends to escape by the side of the tube.

834 North Nineteenth St., Phila.

Acetate of Morphine Hypodermically for Sea-Sickness.—Mr. Philip Vincent, Surgeon to the Cunard Royal Mail Service, has come to the conclusion, after trying nearly all the usual remedies for sea-sickness, that the hypodermic injection of from one-third to one-half a grain of acetate of morphine is by far the most useful of all remedial measures.

AMPUTATION OF RIGHT LEG

AND THIRD, FOURTH AND FIFTH METATARSALS OF RIGHT FOOT.

BY WILLIAM S. JANNEY, M.D.

Read before the Philadelphia County Med. Society, April 16, 1884.

MR. CLARKSON, a colored man, æt. 41, was admitted to the Surgical Department of Philadelphia Hospital, December 26, 1883. He was a driver for the Messrs. Bumm, salt merchants of this city. He was exposed to the intense cold of the third week of last December. A few days before his entrance to the Hospital he noticed that his feet were swollen; he cut his shoes and continued to work until the 22d. On the 25th both feet were swollen, the left the most, with the characteristic appearances of gangrene. In a few days sloughing commenced, and charcoal poultices were applied. On the 9th of January the line of demarcation on the left ankle was evident. On the 16th of January the line was deeply cut, and had begun to form on the right foot from the second interdigital web backward to the base of the fifth metatarsal. On the 16th, the left leg was amputated four inches above the ankle-joint, by a double tegumentary flap operation.

The stump was dressed with carbolized oil, and syringed out with carbolized water, 1-40 daily. The patient's general condition was bad.

At the end of the fifth day the wound was dry, and gangrene had destroyed half the upper and nether flaps. The mortified portion was cut off with scissors, the edges of the flaps were approximated with wire sutures and straps of rubber adhesive plaster, which the intentional redundancy of the flaps permitted, the wound healing without accident.

The tissues of the right foot continued to slough. On the 6th of February it presented the following appearance. The third, fourth, and fifth metatarsal bones and their phalanges were completely denuded, except the tendons of the extensor muscles, which remained attached to their respective insertions.

In consultation with my colleagues, it was thought that no operation short of Chopart's would be likely to succeed, as the remaining integument and underlying tissues covering the first and second metatarsal and their phalanges were infiltrated and boggy, indicating a very low vitality.

Mr. Clarkson was very desirous of having as

much of his foot saved as possible, and with his approval I disarticulated the third, fourth, and fifth metatarsal bones, leaving an open wound, which was dressed the first twenty-four hours with carbolized oil. Gangrene speedily appeared in the wound; a poultice of tar, iodine, and flaxseed was crowded between the gaping edges; in three days the wound was clean and full of granulations: the wound was then dressed with a solution of bichloride of mercury, 1-1000; straps of adhesive plaster were applied, so that the edges were gradually approximated. At present the left stump has healed entirely, except a slight break, through which a necrosed portion of the bone was removed; the right foot has healed; the foot is in the condition of slight varus, but is very serviceable; the man's general condition is good.

The internal treatment was quinine, iron, and chlorine water.

MAKING A SQUINT TO IMPROVE VISION.

BY JULIAN J. CHISOLM, M.D.,

Professor of Eye and Ear Surgery in the University of Maryland, Surgeon in Charge of the Presbyterian Eye, Ear, and Throat Charity Hospital, etc.

EXPERIENCE in Surgery means the adaptation of means to secure a desired result. The plan of operative procedure is not always that of regular methods, as per text books. The special application of a familiar operation may secure so good a result as to warrant the extravagant use to which it is put. In eye surgery an opportunity may present itself in which the most desirable effects can sometimes be obtained by a comparatively simple although unusual operative procedure. The case herewith reported is one of this nature, in which the tenotomy of an unoffending muscle was made to produce a beneficial squint, reversing the order for which the tenotomy of eye muscles is usually undertaken.

W. T., aged 28, had purulent ophthalmia in infancy. The right eye was destroyed by corneal sloughing, and is now an atrophic stump. The left eye was also seriously affected with restricted corneal ulceration, which perforated the coat, emptying the anterior chamber. The corneal perforation was closed by adhesion of the iris, leaving a clear pupil in a most unusual position. He applied to me for aid twenty-seven years after the attack which had so materially damaged his vision. I found him with sufficient sight in the left eye to get about. He was educated at the blind asylum, and could speak intelligently of his condition. Upon examination I found the right eye destroyed. The lower three-fourths of the left cornea were opaque, and to this the iris was freely adherent. A clear pupil, round in shape, and of good size, extended upward from the cicatricial cornea to the ciliary border. At first glance it gave the appearance as if a very successful iridectomy had been performed. A closer inspection showed an upper rim of pupillary border, the original sphincter pupillæ, an evidence that no operation had been performed. The normal position of the upper lid nearly concealed the pupil, exposing only the lowest portion of the opening, where the cornea was somewhat hazy. When he desired to see most clearly he lifted the lid with his hand. This was an awkward manipulation. He applied to me to know whether an operation for shortening the lid so as to keep it permanently propped up, would not add to his comfort. It occurred to me that a better and much more permanent result could be secured with much less disfigurement by cutting the superior rectus muscle. It would create a downward squint, and would allow the pupil to take up a position clear of the border of the upper lid, and it would therefore assume nearly its normal place, as regards the blepharitic fissure. As the operation was not likely to damage the sight which he valued so highly, and also promised to improve it, he willingly consented to its performance. Under the quiet sleep of bromide of ethyl the upper rectus tendon was divided. The lower rectus, having now no opposition, rotated the eyeball downward, just enough to give the displaced pupil the desired central position.

I saw the patient one week after the operation, the day previous to his leaving Baltimore. He came to thank me again for the improved vision, which he had recognized as soon as he came out of the ethyl sleep. He has for the past week experimented extensively with his newly-acquired field of vision, and expresses himself very much pleased with the result. The central position of the pupil has improved his appearance, and he has the comfort of seeing now as he only saw formerly when he lifted the upper lid with his hand. The improvement promises to be a permanent one.

The case is reported because this method of

procedure is not known to surgeons generally, and because eye surgeons are not as familiar with it as they should be. After receiving my opinion this patient consulted two distinguished specialists in eye work. They both advised against such an operative procedure, with which they had had no experience. With tenotomies for the correction of squint, they had both had a very large experience. With tenotomy for the creation of a squint by which sight was to be improved, they knew nothing.

PHILADELPHIA CLINICAL SOCIETY.

STATED MEETING, JUNE 27, 1884.

Dr. HENRY BEATES, Jr., in the Chair.

Dr. G. BETTON MASSEY read a paper on "Traumatic Sciatica, and its Relation to Hip Injuries." Details of six cases were related, in the majority of which the sciatica had been overlooked, while attention was directed to a search for osseous injury. In the first case he was called in consultation to see an aged gentleman who had fallen on an icy spot of pavement eleven days previous. In falling he struck heavily on the left hip, and it was with difficulty that he arose and walked home, a distance of four and a half blocks. His family doctor, a prominent physician and an expert diagnostician, when called in searched diligently for fracture, but could find none, notwithstanding the evident helplessness of the limb and the attacks of excruciating pain, that was made worse by movement. At the time he was called in the physician had about concluded that the pain must be imaginary.

On examination the absence of any kind of fracture was apparent. The patient could lift the limb but a few inches from the bed. He was suffering from continuous and severe pain, felt most at points corresponding to the sacro-iliac notch of the affected side, the rear of the head of the fibula, and the seat of the external malleolus. The pain was aggravated by any movement, but especially by flexion of the thigh and extension of the leg. It was clearly a case of sciatica caused by contusion of the nerve in falling.

At the request of the medical attendant the reader of the paper joined him in the care of the case, and applied the continuous descending galvanic current to the affected nerve, ending each sitting with a series of muscle-contracting interruptions of the current; great gentleness being required at first to avoid aggravating the pain temporarily. Good effect was manifest after the first visit, and eleven applications sufficed to establish a complete cure, recent careful inspection failing to detect either awkwardness of gait or atrophy of the posterior muscles.

CASE II. was that of a German woman, aged 73. On the 15th of January, 1883, she fell on the ice, fracturing the neck of the femur outside the capsular ligament. After being totally neglected for two weeks, a member of the family asked the reader of the paper to take charge of the case. He found the limb 1¼ inch shorter than its fellow and greatly everted. At the seat of injury the great trochanter was lost in an abundant deposit of callus. No crepitus could be found. Great pain existed throughout the distribution of the large sciatic nerve, being especially felt in the peroneal and posterior tibial branches. Considering the age of the patient and the attempt at union already made by unaided nature, it was deemed unwise to interfere with the broken bone, so remedial efforts were entirely directed towards the relief of the sciatica. A series of blisters were directed, chloroform injections made, various stimulating and anodyne liniments applied, together with the internal administration of opiates and sedatives; but he felt bound to say the case seemed slowly to improve without being affected by any of these remedies. Electricity was not used, as the patient was too far from the office to make it possible to apply it with sufficient frequency, and the friends declined to have her removed to a hospital. The pain continued over a year in gradually decreasing severity, and though the patient has now been able to walk with crutches for some months, there is much atrophy of the muscles supplied by this nerve.

The remaining four cases were selected from the large number of cases of sciatica treated by the writer at the electric clinics of the Orthopædic Hospital and Infirmary for Nervous Diseases:—

CASE III. A healthy hod-carrier was sent from Dr. Wharton Sinkler's clinic, November 16, 1881. Seven weeks before, while carrying his usual burden up a ladder, the right foot slipped on a stick and threw the thigh into extreme flexion. He immediately felt an acute pain at the point of emergence of the sciatic,

and following that nerve down the thigh into the peroneal. It was sharp and pricking in character, and had remained continuously present since the accident, being worse at night. He was unable to walk more than a block at a time, and presented a gait markedly characteristic of sciatica. No atrophy was found. He was placed upon static electricity, positive sparks being drawn from the painful points and course of the nerve. After the fifth application it is noted that he was much better; after the twelfth, that he walks three miles to the hospital, and after the twenty-second application he was discharged cured.

CASE IV. A carpenter, aged 68, was sent from Dr. Sinkler's clinic, September 29, 1880. A healthy man, eight months before admission he fell on the ice, striking the right hip. He was compelled to remain in bed six weeks, suffering from pain in the region of the small and great sciatics. His physician was uncertain whether fracture was present or not. On examination the gluteal and flexor muscles of the right leg were found much atrophied. He complained of great pain in the course of the right sciatic knee, and also in the distribution of the external peroneal. At times felt some pain in the left leg. He was placed in the constant galvanic current thrice weekly. At the end of forty-two applications he is noted as entirely well.

CASE V. A man, aged 40, was sent from Dr. S. Weir Mitchell's clinic, May 6, 1881. Four months before he had fallen and dislocated his right hip. This was reduced shortly afterwards, and he remained in the hospital eleven weeks, during which time, and up to his appearance at the clinic, he suffered from much pain throughout the sciatic distribution of that side. There was considerable atrophy of the buttock and limb, a difference of 1¼ inches being found six inches below the trochanters. He was placed upon five-grain doses of potass. iodide and the constant current thrice weekly. After thirty-five applications of the battery and considerable quantities of the iodide, it was found that the pain had ceased, but that some atrophy remained.

CASE V. A porter, aged 39, was sent from Dr. Mitchell's clinic, June 30, 1881. Fifteen months before he had been crushed between a platform and a moving car, fracturing the pelvis on the right side. At his first appearance at the clinic some crepitus was still present, and there was two inches shortening of the right leg. He complained of much pain in the region of the sciatic nerve of the right side, which was increased by motion and exercise. He had been blistered, and was taking five-grain doses of the iodide, when sent to the electrical clinic. After twelve applications of galvanism, with some benefit, the summer vacation compelled a discontinuance, and he did not reappear in the autumn.

The obvious conclusions to be drawn from these cases were stated as follows:—

1. Surgeons called to cases of hip contusion or suspected fracture, should not fail to search for evidences of injury to the delicate nervous structures here situated.

2. If such evidences of nerve injury are found, prompt and energetic measures of relief are indicated, the importance of which is emphasized by the complete and rapid recovery of the two cases which were treated early.

3. Of the four remaining cases, one was distinctly benefited and two cured by more or less long-continued (one to five months) galvanic treatment. The fourth did not receive galvanic treatment, and was fully a year in duration.

Dr. E. E. MONTGOMERY inquired how many cells had been used in the treatment. He thought that, considering the usual obstinacy of the class to which the cases related belonged, due to the inflammation of the sheath of the nerve, the treatment had been satisfactory.

Dr. L. BREWER HALL related the details of a case similar to those described, which had been caused in a lady by a fall from horseback, alighting on the seat. The pelvis was fractured, and a long-continued sciatica supervened.

Dr. DU BOIS called attention to the value of balsam of Peru as an application for fissured nipples. It should be applied after nursing, about four times daily.

Dr. HALL, on behalf of the Committee on Microscopy, presented an improved clinical microscope, which combined all the features of a clinical with those of an ordinary table stand.

A correspondent of the Lancet says that Dr. Weir, Health Officer of Bombay, found in the well water used by certain cholera patients the so-called cholera bacillus discovered by Professor Koch. Dr. Balfour, who was present, drank at once a quantity of the water, much against Dr. Weir's wishes. But Dr. Balfour was not in the least disturbed by the cholera bacillus, and Dr. Weir can hardly say whether or not he is pleased with the result of the experiment.

THE
Medical Bulletin.

JOHN V. SHOEMAKER, A.M., M.D., Editor.
F. A. DAVIS, Att'y., Publisher.
A. L. HUMMEL, M.D., Business Manager.

Philadelphia, August, 1884.

PUBLISHER'S ANNOUNCEMENT.

Contributions of interest to the medical profession, such as reports of cases, trial of new remedies, accidents in practice, and results of original investigations are respectfully solicited. THE BULLETIN goes to press on the 20th of each month, and to insure insertion in the current number, all articles intended for publication should be sent to the Editor at as early a period as possible. Authors wishing reprints of their contributions are requested to communicate with the Publisher before insertion. Special arrangements will be made to pay liberally for original matter.

Change of residence of physicians, items of professional interest, marriages and deaths, professional and business changes of physicians and pharmaceutists, will be published gratuitously, provided the announcement does not exceed five lines in type.

The attention of the business community is directed to the superior advantages enjoyed by THE BULLETIN as a medium for advertising their wares. Advertisements are inserted at very reasonable rates.

Our readers will confer a favor upon the Publisher by mentioning, when making purchases from our advertisers, that their attention was attracted by the handsome style of THE BULLETIN'S advertisements.

Notwithstanding the enlargement of THE BULLETIN (and the Publisher will still further increase it should circumstances warrant) the subscription price will still remain ONE DOLLAR per annum, postage prepaid.

F. A. DAVIS, Att'y., Publisher.
1217 Filbert Street, Philadelphia.

CHOLERA.

FOR several weeks past cholera has been prevalent at Toulon, one of the most important French naval stations. The town is extremely dirty, the sewage is bad, and the maritime inhabitants are as careless as the class usually is in matters of hygiene, both personal and public. The first case was probably brought from China on a troop-ship, La Sarthe, one of the sailors having died from cholera on the voyage. No precaution was taken to disinfect the ship, the deceased man's clothes were not burned, and very soon after reaching Toulon the disease spread to other vessels, and thence to the city. Many deaths have taken place. The outbreak is apparently violent, chiefly affecting the very young and the aged. The disease has already appeared in other ports, although efforts are being made to conceal the fact. Our chief danger lies in transmission through the mails, and orders have been issued looking to a thorough system of disinfection in French and British ports, which will undoubtedly have a good effect. The season is as yet early, consequently we have reason to be cautious, for many unseen avenues of infection exist in our large ocean transit arrangements, and although just now the epidemic has somewhat abated at Marseilles, the danger is not past, and it may yet reach the Atlantic seaports. The tide of travel usually setting toward the Continent has already been checked; many tourists are devoting their attention to the Irish and Scotch lakes; hence one great risk is thus avoided. The importation of goods likely to come from infected districts is not heavy at this season. If the disease reaches our shores a rigid system of quarantine and sanitary inspection should be imperatively instituted. Care in dress, in diet, and in freedom from anxiety are important in cholera years. Abstinence from unripe fruits and vegetables, from particular articles known through experience to be deleterious, from undue indulgence in alcoholic stimulants, and prompt attention to any diarrhœal or dysenteric tendency, are very important.

We trust the cholera will not reach us. We believe it will not; but forewarned is forearmed; hence we should be vigilant in our professional oversight of our patients, their homes and surroundings. Inculcate cheerfulness, deprecate forebodings of evil and tinkering with quack nostrums; teach the public that the family physician is their best friend and adviser in times of trouble, and remind the people that cholera does not kill all who take it.

ROBERT E. ROGERS, M.D., LL.D.—We learn, as we go to press, that this distinguished gentleman has tendered to the Trustees of Jefferson Medical College his resignation of the chair of Medical Chemistry and Toxicology in that institution. Of course, in this hurried announcement, it is impossible for us to give an extended account of Prof. Rogers's long and brilliant career as lecturer and teacher, but shall reserve further comment for a future number of this magazine.

THE HYGIENE OF OUR MILITIA.

In the early part of August nearly eight thousand of Pennsylvania's citizen soldiery will go into camp for eight days on the historic field of Gettysburg, under command of one of Pennsylvania's most distinguished generals. The interest THE BULLETIN takes in the National Guard compels us to propound the query, whether or not the responsible officers have studied with due care and diligence all the necessary sanitary precautions which should be observed when so large a body of men are brought together in the heat of midsummer. In military life, more than in any other sphere of action, does the time-honored adage, "An ounce of prevention is worth a pound of cure," hold good. Green troops—and our guardsmen, for the most part used to sedentary occupations, and unaccustomed to the fatigues and exposure incident to life under canvass, must be considered as green troops—require constant looking after on the part of the officers charged with the administration of their interests. Otherwise, during the first few days of field service they are apt to suffer severely. So far, since the institution of annual encampments by brigades and divisions, we seem to have done well. According to the Division Surgeon's report for 1882, we find that out of some seven thousand men who participated in the Division Encampment at Lewistown, in the summer of that year, four hundred and sixty-six men were reported on the sick-list. Of this rather large percentage, however, the majority presented themselves but once at sick call, and but thirty-five were ill enough to necessitate treatment in the hospital. The prevailing disease was acute diarrhœa of a mild type, of which two hundred and twenty-five cases were reported, together with thirty-six cases of heat-stroke and five injuries of a slight nature. The only really serious case was that of a cook in one of the commands who developed a case of variola shortly after his arrival in camp. Thanks, however, to the prompt and energetic measures taken, the disease was stamped out, and no other cases occurred.

Concerning the sanitary conditions of the Brigade encampments last summer at Phœnixville, Conneaut Lake, and Williamsport, in which some eight thousand men were in service, it is a matter of regret that the Adjutant General's report for 1883 contains none of the medical officers' reports; and beyond the casual statement, "that there was little or no sickness;" no information is given, though we are informed that, in one of the brigades, the efficiency of whose medical staff is beyond all doubt, such was the paucity and general worthlessness of the medical supplies furnished by the State, that it may be considered exceedingly fortunate "that there was little or no sickness." In one of the regiments, in spite of the fact that requisitions had been forwarded to the proper authorities, the pharmaceutical equipment placed at its disposal was sorely deficient in quantity as well as in quality. The toy medicine chest, with which the regiment was furnished, could have contained, at most medical supplies for two companies, let alone a regiment, had an emergency arisen. Sent in obedience to orders, to some leading drug house, the staple of its contents when returned proved to be certain fluid extracts and compressed pills, of which the firm makes a specialty. Such remedies as cough and diarrhœa mixtures, for which requisition had been made in due form, were absent, but compressed diarrhœa pills were furnished instead. The fluid preparations were furnished in quantities varying from a half to a fluid ounce and a half. We have ourselves seen the vial containing the half a fluid ounce of castor oil intended for the use of a battalion of nearly five hundred men. The solids, such as potassic bromide, plumbic acetate, and zinc sulphate, were supplied in quantities of half an ounce each. In place of filling the vials belonging to the medicine chest furnished by the State, they were allowed to remain empty, and the compressed pills were sent down in the bottles of the firm. The whole supply was looked upon as so worthless; that on the suggestion of the regimental surgeon a sufficient supply of suitable remedies was provided at the expense of the regiment. Comment upon such an unfortunate condition of affairs seems needless. But the question instantly arises as to who is responsible for this disgraceful condition of affairs, which would be farcical, were it not that serious consequences might arise from a repetition of such neglect. We are in ignorance as to how the purchase of medical supplies for the State is conducted, but in view of the recent exposures in the Medical Department of the Navy, and past experiences concerning the manner in which the Medical Department of the Army did business, should the melancholy farce of issuing useless supplies be reënacted this year, we are of the opinion that the proper authorities could do

no better than employ some of the many brilliant staff officers who adorn our militia in making a thorough investigation of this subject. Troops in the field should be supplied with a sufficient quantity of suitable remedies available for all emergencies which might arise, and already properly prepared for dispensation.

Again, we are chagrined to observe that in his report for last year the Commissary General seems to call attention exultingly to the small expense to which the State is put in subsisting the troops when in camp. Last year the cost of a day's ration per man in the First Brigade was 20 cents, in the Second Brigade, 16 7-16 cents, and in the Third Brigade, 19¼ cents, making the average cost per ration for the whole division, 19¼ cents; so that the military force of the State, many members of which are called away from their usual avocations, frequently at a loss of time and money to themselves and families, are less well treated than the prisoners in our county jail or the felons in our Penitentiary, the cost of whose subsistence averages, we believe, 25 cents per diem. We therefore heartily coincide with the Commissary General, when, a little further on, he states that he does not deem a continuance of the present plan a wise course to pursue, and suggests that the cost of a ration be increased up to 30 cents, in order that the men may enjoy fresh vegetables and a greater variety of diet. For taking men from the comforts of their homes, and placing them in an entirely new condition of life is already a severe task upon their system, which should, as far as possible, be met by a judicious increase of diet, and not by reducing them to the coarse monotony of the U. S. Army rations. To this they can only become accustomed by degrees, as they gradually inure to their active life in the open air. In nearly all the commands, the enlisted men voluntarily contribute an average of one dollar per man out of their scanty pay to supplement the meagre ration issued by the State. Such a condition of affairs should not be necessary, and that it exists is no credit to the State. A full belly makes a contented soldier, and a man who is well fed supports fatigue better, and always does his duty cheerfully and well. Drill and discipline are not the only necessaries of an armed force. Attention to the creation, and maintenance of good hygienic conditions, are equally important. Healthy camping-grounds, a plentiful supply of good water, cleanliness—enforced, if need be—wholesome food in abundance, a liberal supply of medicines, and competent officers, both in the line and staff, are most important factors to the well-being and efficiency of our citizen-soldiers, and should receive every care and forethought from those in authority.

Dr. J. V. SHOEMAKER, now attending the British Medical Association at Belfast, and the International Medical Congress at Copenhagen, during his sojourn in London had marked attention shown to him by the most prominent physicians of that city. Dr. Balmano Squire gave a large and superb dinner in his honor, which was attended by many distinguished gentlemen. Dr. Malcom Morris conducted him through the wards of the Westminster Hospital, and he was presented to the class at the St. Mary's Hospital. He also attended, by invitation, the clinics of Dr. T. Colcott Fox, one of the foremost of dermatologists in London, and brother of the late Tilbury Fox. He was invited to lecture by Dr. Murrell to the class at Westminster College, on the oleates. This lecture is to be reported for the British Medical Journal.

AMONG the most pleasant and healthful resorts of our Jersey coast, there is probably no place that excels Cape May Point. With an ever-blowing breeze to cool off the summer temperature, free from swamp and malarial infection, with good drainage, it is certainly what is needed for those in delicate health to keep well, and convalescents or invalids to regain their health under the most favorable circumstances. It is a pleasure to note, in connection therewith, the superior hotel accommodations offered by the "Carlton House," of that place. Better than it there is no hostelry on Jersey's long sea line; supplied with all the modern hotel improvements, under the management of a most genial and ever-provident host, with a cuisine unrivalled anywhere, it is the place to send your patients and convalescents.

To disinfect a room, place an ordinary house shovel over the fire until it becomes thoroughly hot (but not red hot); then take it to the centre of the room and pour on the shovel an ounce of No. 4 or No. 5 carbolic acid; lean the shovel so that no fluid can fall to the floor, and the acid will be readily given off in vapor sufficient to fill an ordinary room. This will disinfect the air of the room, and as genuine carbolic (more properly called phenol or phenylic alcohol) is not a mineral corrosive acid, the vapor will in no way injure pictures, metals, or fabrics.—*Ex.*

MEDICAL NEWS AND MISCELLANY.

Dr. Charles Harmonson has removed to Clayton, Del.

Dr. G. T. Matlack has been appointed resident physician to the Wilkes-Barre City Hospital.

Dr. Wheeler, of the Class of '81, is appointed Assistant Pathology to Professor M. C. White, at the Yale Medical College.

Dr. John E. Sheppard has permanently settled at Atlantic City, N. J., and located on the corner of Pacific and Kentucky avenues.

The oxygen treatment of cholera in Toulon has soon proven itself another one of the much vaunted therapeutic fallacies in that disease.

Female vaccinators have been introduced into Madras, so that native women need not have their prejudices shocked by being treated by medical men.

G. F. Lewis, of Stratford, passed a successful examination as assistant surgeon at the State Hospital of New Haven, to enter upon duty August 1st.

Dr. Walter M. L. Ziegler, who was called abroad to attend a prominent Philadelphian in Geneva, has returned after successfully accomplishing his mission.

At the recent commencement of the Harvard Medical School the entire graduating class passed the examinations successfully, and received their degrees as M.D.'s.

David C. Brown, of Washington, Conn., takes the position of House Physician at the Hartford Hospital. The other members of the class—Denis W. Barry, of New York City; Oliver T. Osborne, Henry L. Swain, and George T. Doolittle, of New Haven—will go to the northern part of Germany about August 1st, to qualify themselves more thoroughly in medicine.

THE GLOBUS HYSTERICUS.—Dr. Roth regards this symptom as due to a paræsthesia of the sympathetic. And as the pellitory root has been found useful in paralysis of the tongue and pharynx, the author was led to try it in globus. He gives from ten to twenty drops of the tincture of pyrethrum four times a day. He reports six cases in which he employed this remedy with satisfactory results.

Dr. G. T. Wetmore has removed to 147 West Twenty-second Street, New York. He has been appointed Medical Director of a prominent life insurance company of that city. The Lewis College, of Vermont, has conferred on him the honorary title of LL.D. for his valuable essays on the "Medical Examination for Life Insurance." He is now considered one of the best authorities on that subject.

WANTED.—We will pay liberally for copies of THE MEDICAL BULLETIN for September, 1882, and for files of the years 1879–80, if sent to this office. Address Medical Bulletin, 1217 Filbert Street, Philadelphia.

THE HYPODERMIC INJECTION OF PILES.—Dr. J. W. Girard, of Winchester, Tenn., says "that the use of carbolic acid in hemorrhoids is condemned by the majority of leading physicians, but successfully used by non-professional men." He further asks if there is not something radically wrong in the method of using the remedy, or in the act of condemning it, and continues: "If my experience with the use of the hypodermic syringe in hemorrhoids is worth anything to the profession I give it cheerfully.

"I have used it for about ten years, and have treated, I think, about two hundred cases without a single failure, and in no case has the tumor returned thus far. My course of treatment is generally to take one part of tannic acid, two parts of carbolic acid, four parts of alcohol, and eight parts glycerine. Inject each pile separately, and in a few days they slough away and generally heal kindly under dressings of carbolated cerate. If there is much constitutional disturbance, I generally control it with a steam bath or a hot sitz bath. My confidence in the method is so strong that I would persist in its use in spite of all that could be said against it. I would gladly answer any questions in my power that would enlighten any professional brother on the subject."

ANALYSIS OF PICKLED CUCUMBERS.—Dr. Elwynn Waller, chemist of the Health Department, in his report to the sanitary authorities on the analyses of pickled cucumbers colored artificially with copper, lays stress on two facts noted by him. 1. The cucumbers contained a much larger proportion of copper than the vinegar in which they were immersed. 2. Cucumbers in the same lot contained widely different amounts of copper.

The first fact refutes the assertion on the part of the manufacturer, that soaking the pickles in water or vinegar removes the copper, and also shows that the vegetables have a certain amount of affinity for the metal.

The second fact demonstrates that the method of coloring—immersing a plate of copper in a vat containing cucumbers and vinegar—causes the cucumbers nearest the copper to absorb more of the poison than those situated a little distance off.

The doctor has found copper in all cereals and vegetables grown in soil containing it. Consequently he states "the question of fraudulent addition of cupric salts to articles of food turns not on the mere presence of copper, but on the proportion present." More than ten parts per million, according to Dr. Dupré, indicates artificial or accidental contamination.

ANOTHER CURE FOR CHOLERA.—General Jordan, of the Mining Record, says: "A tablespoonful of chloroform in about four times as much water is an infallible cure for cholera. A doctor who had lived in Mobile, Ala., and had great success in curing people during a cholera epidemic there, told me about it. When, in the Cuban revolution, I went to Cuba to help organize the insurgent army, I had a chance to try the remedy, for a cholera epidemic broke out among the troops. My first experiment was on a negro who was in the last stages. It cured him and hundreds after him. When we marched the officers carried bottles of chloroform; and if a man fell out, sick with cholera, the remedy was applied, and he was able to resume his place. I have seen men lying by the roadside in a state of collapse, almost dead. An officer would ride up, dismount, and apply the remedy, and before the column had passed the man would be in the ranks again."—*Exchange.*

If intended for internal use, we have no doubt that any man who survives a tablespoonful of chloroform will stand cholera or anything else. Professor Bartholow recommends *a few drops* of chloroform, frequently repeated, as an excellent means of relief in cholera.—ED.

TO RELIEVE PAIN IN THE SIDE IN PHTHISIS.—M. Rigaud discusses in the Journal de Therapeutique the various means for the relief of the pleuritic pains which are so often the cause of severe suffering in consumption. These pains (*point de coté*) are considered as they occur in the later stages of the disease, when they are due to the inflammation caused by the presence of a superficial cavity. They are aggravated by motions of the thorax. The treatment which M. Rigaud recommends for their relief is the application of collodion. After washing and drying the part, a succession of layers of this substance is applied to it by means of a hair brush, until a kind of cuirass is formed, which offers sufficient resistance not to split during movements of the thorax. If a fissure does occur it must be immediately repaired, and if the pain does not disappear the procedure must be repeated. In most cases almost immediate relief is obtained. While the mechanical action of the collodion is unquestionably of great value, even as the strapping of the chest in pneumonia relieves the "stitch" by giving rest to the part in which it occurs, the benefit is, in our opinion, enhanced by the application of a counter-irritant. As such counter-irritant there is no agent more efficacious, in our experience, than tincture of iodine. There would seem to be no objection to applying this first, and after its physiological action has been secured applying over it a coat of collodion. These means of securing euthanasia will not be deemed unworthy of careful consideration by the conscientious physician.

NEW INVENTIONS AND APPLIANCES.

BEEF PEPTONOIDS.

Professor Attfield, F.R.S., R.I.C., etc., author of a Manual on Chemistry, General, Medical, and Pharmaceutical, gives the following as the result of his analysis thereof in 100 parts:—

Albuminoids (containing nitrogen 10.94),	69.25
Fat,	10.71
Sugar, including a trace of starch,	9.50
Phosphates, equal to bone phosphate,	3.01
Other mineral substances,	2.61
Moisture,	4.92
	100.00

Confirming also the manufacturers' claim that it is composed of dry, lean beef, partially digested or peptonized, one-third; solids of milk, minus most of the fats, one-third; gluten of wheat, one-third. The gluten therein, he reports, as almost pure, containing a new trace of starch; the albuminoids were more than one-fourth soluble, the whole being soluble in peptonizing fluids. He considers it the most nutritious and concentrated food he ever met with, and also palatable and assimilable, containing seventy per cent. of nutritive nitrogenous material, partly peptonized.

Dr. Stutzer, Director of the Imperial Chemical Laboratory for Rhenish Prussia, of Bonn, Germany, in his analysis of the same, closely coincides with that of Professor Attfield, and shows the albuminoids to consist of ninety-seven per cent. albumen and peptone, easy of digestion; one per cent. creatin; two per cent. substances difficult of digestion, and thus readily assimilable. Compared with other foods, it far outranks them in nitrogenous nutritive matter, while possessed of pleasant flavor and odor, and he pronounces it a most valuable and easily digested nitrogenous food for invalids and convalescents.

A urinary test case, by Messrs. Parke, Davis & Co., of Detroit, Michigan, is not alone the neatest, but one of the most compact and useful devices ever presented to the profession. It is intended not alone for qualitative but also quantitative urinary analysis at the bedside, containing everything of value to the physician for this purpose. The graduated dropper pipette, the graduated test tube, along with others inside of it, and the specific gravity beads, making it an easy matter to make observations, constitute part of this great desideratum, while the addition of the urinary test papers are alone sufficient to be termed indispensable for every practitioner, and reflect high credit on this enterprising firm.

"Rough on Rats" is becoming a favorite means of suicide. Several cases have been recently reported in different journals. The stuff is said to be mainly composed of arsenic.

BOOK REVIEWS.

The International Encyclopædia of Surgery. A Systematic Treatise on the Theory and Practice of Surgery. By Authors of Various Nations. Edited by JOHN ASHHURST, Jr., M.D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with chromo-lithographs and wood-cuts. In six volumes. Vol. IV. New York: William Wood & Co. 1884.

The initiatory article of this volume is a continuation of the discussion of Injuries of Bones, by John H. Packard, M.D., of Philadelphia, and is ably and exhaustively treated, embracing 260 pages. It will add considerably to the already distinguished reputation of the gentleman as a surgeon, and one who, by his lucid powers of description, is enabled to give to the medical public his practical experience in a very readable form. Then follows Diseases of the Joints, by Richard Barwell, F.R.C.S., Surgeon to Charing-Cross Hospital, London. The subject is likewise thoroughly discussed, and in doing so the writer has exhibited his familiarity with the different diseases to which the joints are liable, and points out judiciously the symptoms, and the treatment to be adopted in each case. The succeeding article is by the editor, Dr. John Ashhurst, Jr., on Excisions and Resections. Any one wishing to have presented to his view in excellent English all that can be said in a small compass on this subject will do well to read Dr. Ashhurst's essay; they will be amply repaid and probably thank us for calling their especial attention to it. Next in order comes Excision of the Knee-Joint, by George E. Fenwick, M.D., C.M., Professor of Surgery in McGill University, Surgeon to the Montreal General Hospital, etc., which is succeeded by Mr. Henry Trentham Butlin's article on Tumors. As this gentleman holds a prominent position as Demonstrator of Surgery at St. Bartholomew's Hospital, London, it is scarcely necessary for us to speak of the peculiar fitness in his selection as a contributor, and how well he demonstrates the knowledge he has acquired. The most elaborate article in the book follows next, on Injuries of the Back, by John A. Lidell, A.M., M.D. It also possesses the melancholy interest of being a posthumous contribution, the author dying almost as the last proof-sheets of his work were being corrected. Dr. Lidell was an able and brilliant writer, and his remarks will bear careful and attentive reading, for they carry instruction with them. Now comes, at the close of the volume, Malformations and Diseases of the Spine, by Frederick Treves, F.R.C.S., Senior Demonstrator of Surgery at the London Hospital. Of this important subject there are but few who can point out so wisely the symptoms and the means to be adopted, both palliative and curative, as Dr. Treves.

We have, on the publication of each volume, expressed our gratification in no measured terms of this important addition to our medical literature which Dr. Ashhurst is furnishing us. There is no lack of the same careful and conscientious revision in this one than was shown in its predecessors. All bear the impress of deep thought, coupled with vigorous intellect. We are also glad to be able to state that it has already assumed a high position among students both at home and abroad, and has already been adopted as a standard text-book in some of our medical schools. The publishers have presented it in a handsome style, in keeping with the other numbers, and are to be congratulated on their enterprise.

Beginnings with the Microscope. A Working Handbook, containing simple Instructions in the Art and Method of Using the Microscope and Preparing Objects for Examination. By WALTER P. MENTON, M.D. Boston: Lee & Shepard, 1884. For sale by J. B. Lippincott & Co., 715 and 717 Market St., Philadelphia.

We here have quite an interesting little manual of some seventy-three pages on the microscope in its use with our profession. It is a timely publication, and will prove of value to beginners. The contents embrace the microscope and working tools; preparing objects; stains and staining; embedding; needle preparations and section cutting; mounting; how to work; and what to work with. Although handsomely printed and bound, and considering the amount of practical information contained in its pages, the price for which it is sold is only fifty cents, thus enabling every one interested in the subject of microscopy to purchase a copy.

Auscultation, Percussion, and Urinalysis. An Epitome of the Physical Signs of the Heart, Lung, Liver, Kidney, and Spleen in Health and Disease. Edited by C. HENRI LEONARD, A.M., M.D., Professor of the Medical and Surgical Diseases of Women, and Clinical Gynæcology, Michigan College of Medicine, Detroit. Detroit: The Illustrated Medical Journal Co., 1884.

The title here given expresses to some extent the contents of this little handbook of 166 pages. It contains 41 wood-cuts, designed to illustrate the text, and they serve their purpose very well. It "has been founded, mainly, upon the handbooks of Thoroughwood and Semple, of London. To these has been added important points gleaned from the works of Professors Da Costa, Flint, Loomis, and Stowell of this country," and various other authors of celebrity. The chapter upon Urinalysis is, however, original, and is by Wm. H. Rose, M.D., Ph.G., of Detroit. The

Editor has performed his work well, and we think the book will prove of valuable assistance to students. It is neatly and compactly put forth by the publishers. Price, $1.00.

An Illustrated Encyclopædia of the Science and Practice of Obstetrics. Edited by F. H. GETCHELL, M.D., Fellow of the College of Physicians; Member of the Pathological Society; Member of the County Medical Society, Philadelphia; Corresponding Member of the Gynæcological Society, Boston; late Gynæcologist to the Jefferson College Hospital; Author of "The Management of Infancy," etc. Philadelphia: Gebbie & Co., 1884.

This splendid production is to be issued in twelve monthly parts, of which we have already received three, and are particularly pleased with them. In their selection of an editor the publishers were fortunate in procuring the services of Dr. Getchell; for there are but few who possess the requisite knowledge and ability to carry out a work, such as this is designed to be, to a successful conclusion, as the gentleman named. There will be eighty-four large plates and numerous wood-cuts, and from the specimens before us they perform their share exceedingly well. The atlas of full-page illustrations, which is an important feature of the book, is carefully copied, largely, from Dr. Moreau's work, the plates of which were destroyed by fire about forty years ago, and which the present publishers have, at considerable expense, re-engraved and incorporated in this publication. A pleasing feature is that, in order to give variety to the appearance of the plates, they are printed in two colors, black and umber—a good contrast. But it is in the text that Dr. Getchell's talents are best displayed, and his judicious editing is seen to the greatest advantage. He must have given a great deal of time and forethought to each author before introducing his opinions, stamped with his own approval, to his readers. If any of our readers wish to possess a really valuable work on obstetrics, illustrated in a magnificent manner, by all means subscribe to this publication, which is issued at the price of a dollar a part—a very low price, when its merits are taken into consideration.

Student's Manual of Electro-Therapeutics. Embodying Lectures delivered in the course on Therapeutics at the Woman's Medical College of the New York Infirmary. By R. W. AMIDON, A.M., M.D., Secretary of the American Neurological Society, etc. New York: G. P. Putnam's Sons. 1884.

This beautiful "little book is presented to the medical public, chiefly as a protest against the mysticism and charlatanry which have ever hung around the literature and practice of electro-therapeutics,"—so says the author in the Preface. He also states his object is, "first, to present that amount of the subject of electro-physics necessary to the proper understanding of the construction and use of medical batteries; secondly, to point out the commoner, gross physiological effects of electricity; thirdly, to outline the methods of electro-diagnosis; fourthly, to determine the kind of electricity and its mode of application indicated in different pathological states."

Dr. Amidon has given us a very interesting work on the subject of electro-therapeutics, and as he writes intelligently it will prove acceptable to the medical public, especially to the young practitioner, to whom it will do good service in this most fascinating aid to medical science. It is fully illustrated with diagrams and cuts, and, we are pleased to say, finishes with a very good Index. A word to the publishers: The medical public are certainly under obligations for the good taste displayed in the books presented by you for their use. They are so handsomely printed and bound that it is almost impossible to resist their perusal; and thus both matter and form seem to be equally mated.

Hooper's Physician's Vade Mecum. A Manual of the Principles and Practice of Physic, with an Outline of General Pathology, Therapeutics and Hygiene. Tenth Edition. Revised by WILLIAM AUGUSTUS GREY, M. B., Cantab., F.R.S., Fellow of the Royal College of Physicians, etc., and JOHN HARLEY, M.D., Lond., F.L.S., Fellow of the Royal College of Physicians, etc. Volume II. New York: William Wood & Co. 1884.

As if in response to our request for an early issue of the second volume of the "Vade Mecum," the Messrs. Wood & Co. present it to us as the June number of their Library. As we expressed our views pretty emphatically last month in reviewing the first volume, we can but say that the second is equally valuable. It is devoted to Special Diseases, and the contents are embraced in ten chapters, with a classification of remedies and formulæ, a glossarial index, and a very good general index. The illustrations number sixty-five. The chapters treat of: I. Diseases of the Nervous System. II. Diseases of the Organs of Circulation. III. Diseases of the Organs of Respiration. IV. Diseases of the Organs of Digestion, and Abdominal Viscera. V. Diseases of the Urinary Organs. VI. Diseases of the Organs of Generation. VII. Diseases of the organs of Sense. VIII. Diseases of the Skin and its Appendages. IX. Parasitic Animals. X. Poisons and their Antidotes.

We have been compelled to omit a number of book notices, with books and pamphlets received.

THERAPEUTIC NOTES.

PILE SUPPOSITORY.

℞. Iodoform, . . . 4 parts.
Balsam peru,
Cocoa butter.
White wax, . . . āā6 parts.
Calc. magnesia, . . 4 "

M. Divide into 12 suppositories. One after each stool.

IN GALLSTONES.

℞. Boldo fl. ext. . . . ʒj.
Syr. simp., ... ʒiij.

M. S. Teaspoonful 4 times a day.

—*Repert de Pharmacie.*

℞. Acid benzoic, . . . 3j.
Irisin,
Euonymin, . . . āā 3ij.

M. in chart. No. 40. Divide. S. One in water night and morning.

—*Larzalere.*

IN MENORRHAGIA.

℞. Fl. ext. cannabis indicael, 3ij.
Fl. ext. hamamelidis virg., ʒij.
Syr. aurant. cort., q.s. ad, ʒiij.

M. S. A teaspoonful 4 times a day.

—*Blackwood.*

WHOOPING COUGH (an excellent remedy).

℞. Fl. ext. eucalyptus globulus, ʒj.
Syr. lactucarium, q.s. ad., ʒiv.

M. S. Teaspoonful every 3 or 4 hours to a child six years old, and less in proportion to infants. —*Blackwood.*

IRRITABLE OR NERVOUS BLADDER.

℞. Ammonii chloridi, . . 3ij.
Ammonii bromidi, . . 3iv.
Infus. gentian comp. . ʒvj.

M. S. A tablespoonful 3 times a day.

—*Goodell.*

TETANUS.

℞. Fl. ext. veratri. vir., . . fʒj.
Fl. ext. gelsemii, . . fʒiij.

M. S. Twenty drops every 3 hours.

—*Harris.*

TAPE WORM.

℞. Pulv. cort. radic. granat., . ʒss.
Pulv. secalis cornuti, . . 3ss.
Pulv. gum. acaciæ, . . 3ij.
Ol. filicis, ... 3j.
Ol. crotonis, . . . gttj.
Pulv. peponis, . . . ʒj.
Sodii salicylat. . . . gr. xv.
Aquæ destillat. . . . ʒviij.

M. S. Take in the morning. Take a cup of coffee one hour before, and apply a sinapism ovre the epigastrium. —*Rowe.*

Professor DaCosta stated that tonsillitis may often be aborted by an emetic, if given early, when the pain and swelling are just beginning to appear. After the attack has been fully established the best treatment will be to keep the parts clean by the frequent use of mild boracic acid or permanganate of potash gargles, and to prescribe small doses of pilocarpin or jaborandi sufficient to keep up slight salivation. If the swelling of the tonsils, and difficulty of swallowing become very great free scarification will generally give immediate relief.

CANNABIS INDICA IN MELANCHOLIA AND MENTAL DEPRESSION WITH SLEEPLESSNESS.—Dr. Wm. Strange, of Worcester, Eng. (British Medical Journal), has observed beneficial results from the use of cannabis in cases of melancholia and mental depression attended with sleeplessness. The usual dose he thinks is too small; at least a grain of the extract, or twenty to thirty minims of the tincture should be prescribed ordinarily. This amount, combined with half a drachm or a drachm of bromide of potassium, rarely fails to give relief. It dulls the anxiety, lessens the depression, and gives restfulness if not sleep. If there be visceral disturbance, hyoscyamus acts well with the cannabis.

Prof. S. W. Gross brought a case of gumma of the breast before the Class last season, which was interesting, both because of the infrequency of its occurrence, and of its resemblance to malignant disease. Gumma of other parts of the body are met with almost every day in hospital practice, but it is extremely uncommon to find this manifestation of the syphilitic poison on the female breast. The patient, who was 28 years old, and appeared to be in good health, complained of trouble in the left breast. Examination showed a cake-like superficial tumor involving the skin and subcutaneous connective tissue. The skin over the tumor was livid in color, and the nipple was retracted into it. These signs apparently pointed to superficial scirrhus. But from the absence of pain, and axillary involvement, as well as the history of a dissolute husband and three miscarriages, Professor Gross concluded that it was a gumma. The woman was put on the mixed specific treatment, and the tumor disappeared in a short time.

Read the advertisements in this number very carefully.

BALTIMORE NOTES.

EDITED BY

HERBERT HARLAN, A.B., M.D., Cor. Sec'y., Alumni Association of Univ. of Md., Ass't Surgeon at Presbyterian Eye and Ear Hospital, and Ass't Dem. of Anatomy, Univ. of Md.

HIRAM WOODS, A.M., M.D., Ass't Surgeon at Presbyterian Eye and Ear Hospital, Chief of Clinic on Dermatology, Univ. of Md., etc.

Dr. George A. Fleming has gone to Halifax.

Professor Wm. T. Howard sailed on the Aurania, and will spend some months abroad.

Professor F. T. Miles is visiting physician to the University Hospital, and Dr. Jos. T. Smith goes out to Bay View every second day in the same capacity.

Dr. N. R. Gorter is summering at Deer Park, in the capacity of resident physician, is reported as looking well, and reports himself as pleasantly and profitably occupied.

Drs. Christopher Johnson, Sr. and Jr., are both now in Europe, and will attend the International Medical Congress at Copenhagen, as delegates from the Medical and Chirurgical Faculty of Maryland.

Dr. Frank West, of the University Hospital, sailed on the yacht Clytie, on the 13th, with a party of friends, for a cruise to Old Point, Cape May, etc., Newport being their most northern destination.

Dr. Randolph Winslow is on duty as surgeon at the University Hospital, and also at Bay View Asylum, and has had a term made more than usually interesting by a large number of capital operations.

Drs. Christopher Johnson, Alan P. Smith, J. H. James, of Elkton, and W. H. McCormack, of Cumberland, have been appointed auxiliary committee for Maryland, to receive subscriptions to the S. D. Gross Professorship of Pathological Anatomy.

The heated term is here, and the city presents its usual quiet aspect at this season. Many of the doctors have followed the example of their patients, and are off enjoying a holiday in the way best suited to their individual taste and convenience. The daily papers give us daily accounts of the spread and increase of mortality in Europe from the cholera, and Dr. Stewart, our Health Commissioner, and his assistant, Dr. McShane, are making every effort to have the city put in as cleanly a condition as possible, in view of the contingency of its introduction here. In addition, arrangements have been made and plans adopted for quarantining and thoroughly fumigating all vessels from the Mediterranean, or from any other ports where cholera is known or suspected to prevail.

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